

Level Probe

BLP1

The level probe BLP1 was designed for severe conditions, especially for navigation or offshore applications. Due to the housing material CuNiFe, a special copper-nickel alloy, in combination with several mounting types, the BLP1 can be used with all media occurring in the field of navigation, and with various tank, container and basin configurations.

Features

- ▶ Accuracy acc. to IEC 60770 0.25% / 0.1% FSO
- ▶ Marine approval: DNV-GL
- ▶ Level probe made of CuNiFe alloy (1.4404 on request)
- ▶ Excellent seawater resistance
- ▶ Installation in tank as submersible probe with cable, with stainless steel pipe or with mounting bracket
- ▶ Installation outside the tank by means of threaded connection and optionally with adapter flange DN25 or DN50
- ▶ Due to flush measuring diaphragm even suitable for high viscosity media (removable protection cap)
- ▶ Low temperature error, long-term stability
- ▶ High resistance to electrical faults (incorrect wiring, short circuit and overvoltage)
- ▶ Rugged and reliable
- ▶ Option: Ex II 1G Ex ia IIB T4 Ga

Applications

- Ballast containers
- Fuel and oil tanks
- Service and waste water tanks
- Draft measuring systems
- Tank level measuring systems



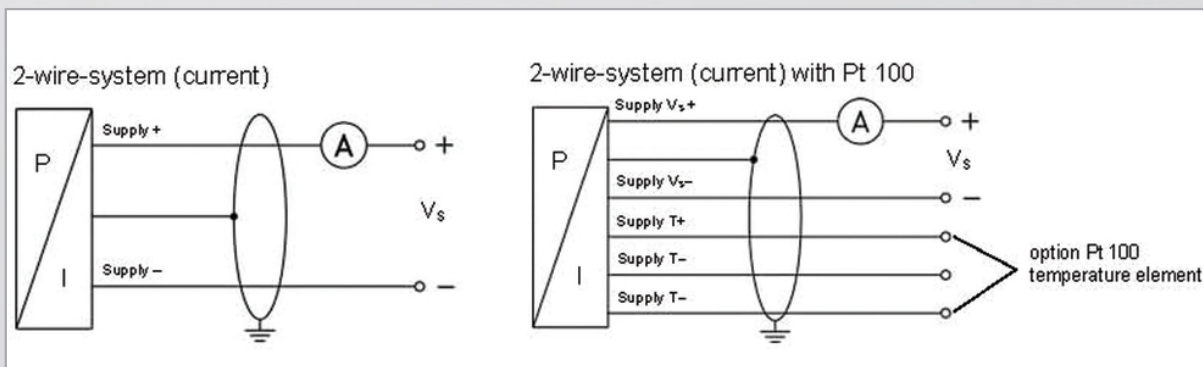
Clamp Material

Clamp material	Dimension	
	a	L
CuNiFe	82/3.22	100/3.93
Stainless steel	100/3.93	130/5.11

Connection Chart

Pin configuration	Electrical connections Cable colors according to DIN 47100
2-wire-system: Supply + Supply - Earth	white brown Cable shield
Option PT100 Supply + Supply - Supply -	yellow grey pink

Wiring Diagrams



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Technical Data

Materials:	Copper-nickel alloy (CuNi10FE1Mn)														
Housing:	Option: stainless steel 1.4404														
Diaphragm:	standard: ceramics Al ₂ O ₃ 96 %														
Seals:	FKM, option: FFKM														
Cable sheath:	TPE, seawater-proof, halogen-free, temperature resistant up to 125 °C														
Protection class:	IP68 (DIN 40050)														
Weight (without cable):	approx. 400 g														
Measuring range:	0.04	0.06	0.1	0.16	0.25	0.4	0.6	1.0	1.6	2.5	4	6	10	16	20
Nominal pressure PN [bar] rel.:	0.4	0.6	1	1.6	2.5	4	6	10	16	25	40	60	100	160	200
Filling height FH [mWC]:	2	2	4	4	6	6	8	8	15	25	25	35	35	45	45
perm. overpressure Pmax [bar]															
Linearity error:	acc. to IEC 60770 - limit point adjustment (nonlinearity, hysteresis, repeatability)														
Standard:	≤ ±0.25 % FSO														
Option:	≤ ±0.1% FSO														
Load:	2-wire system: [UB (V) – 10 V] / 0.02 A														
Influence effects:															
Auxiliary energy:	≤ ±0.05% FSO / 10 V														
Load:	≤ ±0.05% FSO / kΩ														
Electrical connection:	Special cable with integrated air tube for atmospheric reference														
Cable protection:															
Standard:	without cable protection														
Special design:	Stainless steel pipe (available as compact product with stainless steel pipe with a total length of up to 2 m)														
Auxiliary energy:															
Standard:	Operating voltage: 9 ... 32 V DC														
Option:	Ex protection: 14 ... 28 V DC														
Output signal:															
Standard:	2-wire system														
Current:	4 ... 20 mA														
Temperature:	PT100 (3-wire)														
Long-term stability:	≤ ±0.1% FSO /year														
Temperature error:															
error for offset and span:	≤ ± 0.1 % FSO														
in compensated range:	-20 ... 88 °C														
Temperature range:															
Operating temperature:	-25 °C ... +125 °C														
Storage:	-40 °C ... +125 °C														
Mechanical stability:	4 g Vibration acc. to IEC 60 068-2-6														
Approvals:	DNV-GL Optional: ATEX Cert. No IBExU10ATEX1142 X / Ex II 1G Ex ia IIB T4 Ga, ambient temperature range: -25°C ≤ Ta ≤ +70°C The device may only be operated in an explosive atmosphere that requires category 1 equipment if atmospheric conditions are present (temperature -20°C to +60°C, pressure from 0.8 bar to 1.1 bar).														
Mounting accessories (not included in the scope of delivery):	Mounting clamp made of CuNiFe, stainless steel Mounting flange for fixing submersible level transmitter made of stainless steel DN25 / PN40														

Accessories

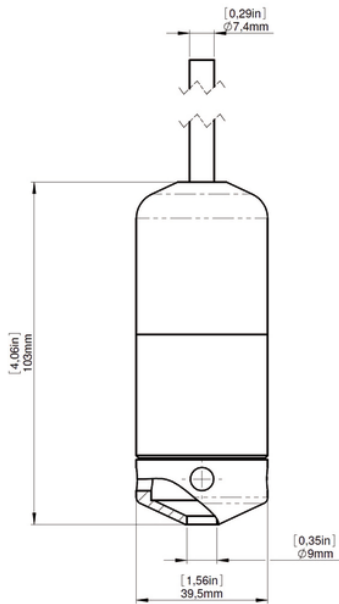
Order Number	Description
906-0984	Adapter flange DN25 / PN40 for flange probe
906-0985	Adapter flange DN50 / PN40 for flange probe
0499-022	Mounting flange for fixing submersible probe made of stainless steel DN25/PN40

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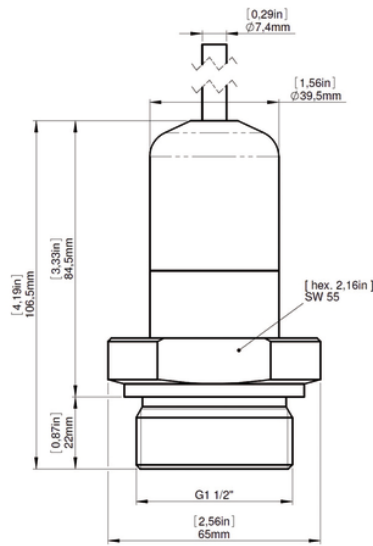
Dimensions (mm / inch)

Submersible version



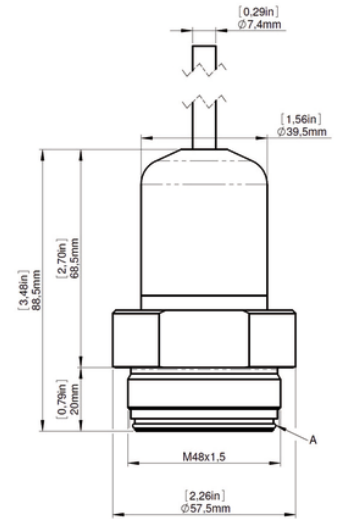
930-0124 A

Screw-in version



930-0125 B

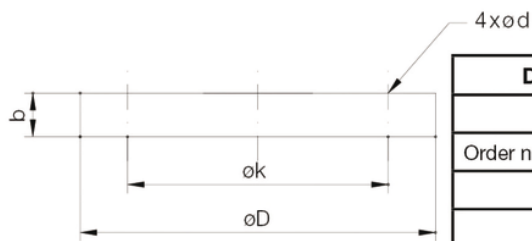
Flange version



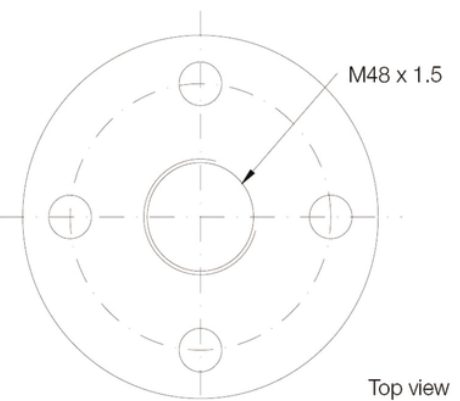
A O-Ring 40x2 V100.S

930-0127 A

Adapter flanges of stainless steel (accessory)

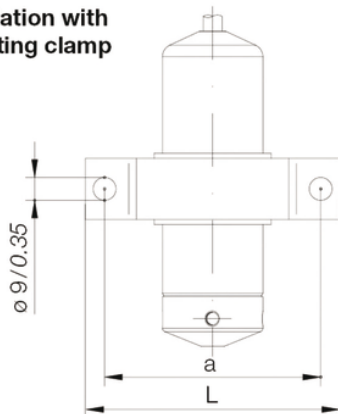


Dimensions in mm		
	DN25	DN50
Order no.	906-0984	906-0985
b	18	18
k	85	110
D	115	150
d	14	18

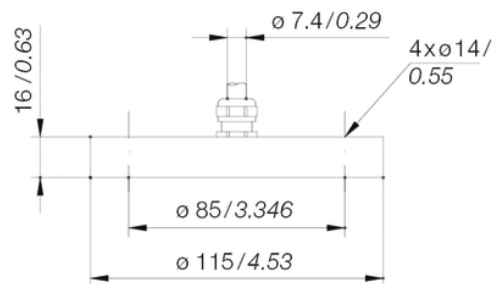


Top view

Installation with mounting clamp



Mounting flange DN25 for submersible probe



Order Code

BLP1			Base model	
	S			Process Connection
	F			Submersible probe
	E			Flange M48x1,5
				G11/2" screw-in probe
				Range
	mWs	bar		
	0,4	0,04	0...0,4 mWs (0...0,04 bar)	
	0,6	0,06	0...0,6 mWs (0...0,06 bar)	
	1,0	0,10	0...1 mWs (0...0,1 bar)	
	1,6	0,16	0...1,6 mWs (0...0,16 bar)	
	2,5	0,25	0...2,5 mWs (0...0,25 bar)	
	4	0,4	0...4 mWs (0...0,4 bar)	
	6	0,6	0...6 mWs (0...0,6 bar)	
	10	1,0	0...10 mWs (0...1 bar)	
	16	1,6	0...16 mWs (0...1,6 bar)	
	25	2,5	0...25 mWs (0...2,5 bar)	
	40	4,0	0...40 mWs (0...4 bar)	
	60	6,0	0...60 mWs (0...6 bar)	
	100	10	0...100 mWs (0...10 bar)	
	160	16	0...160 mWs (0...16 bar)	
	200	20	0...200 mWs (0...20 bar)	
			Housing	
		SS	Stainless steel 1.4404 (316L)	
		CNF	CuNiFe1MN	
			Electrical connection	
		TxM	TPE cable x meter (to order separately)	
			Sealing	
		F	FKM	
		FF	FFKM	
			Option	
		EX	Exi Approval	
		PT100	PT100 (not Exi)	
Order code example:				
BLP1	/	S	/	6mWS
	/	SS	/	T10M
	/	F	/	PT100